Attorney's Docket No. 21891.02500

#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

in the application of:

Christopher Hoover

Examiner: .

的: METHOD FOR HIERARCHICAL SPECIFICATION OF SCHEDULING IN

SYSTEM-LEVEL SIMULATIONS

Serial No.: 09/691,406

Filed: October 17, 2000

Group Art Unit: 2123

#### TRANSMITTAL LETTER

Attn: Application Processing Division

**Customer Correction Branch** 

**Assistant Commissioner for Patents** 

Washington, D.C. 20231

Sir:

Enclosed is a Request For Correction Of The Official Filing Receipt for the above-identified patent application.

The Commissioner is hereby authorized to charge any additional fees (or credit any overpayment) associated with this communication and which may be required under 37 CFR § 1.16 or § 1.17 to Deposit Account No. 03-3821, referencing Attorney Docket No. 21891.02500. A duplicate sheet is attached.

Respectfully submitted,

Crosby, Heafey, Roach & May

Professional Corporation

Name: John W/Carpenter

Registration No. 39,129

Attorneys for Applicants

Dated: December 19, 2000

Two Embarcadero Ctr., Ste. 2000

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CERTIFICATE OF MAILING - 37 C.F.R. § 1.08

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Attn: Application Processing Division, Customer Correction Branch, Washington, D.C. 20231 on December 19, 2000.

December 19, 2000

Kebecca M. Rebecca M. Klits



#### IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

he application of: Christopher Hoover

For: METHOD FOR HIERARCHICAL SPECIFICATION OF SCHEDULING IN SYSTEM-LEVEL SIMULATIONS

Serial No.: 09/691,406

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Examiner:

Group Art Unit: 2123

Technology Center 2100

#### REQUEST FOR CORRECTION OF THE OFFICIAL FILING RECEIPT

Attn: Application Processing Division Customer Correction Branch Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

Attached is a copy of the Filing Receipt which was received in our offices on December 19, 2000, in connection with the above-identified application.

The Filing Receipt is in error. Please amend the receipt as shown in red ink on the attached copy as follows:

The Title should read:

Method for <u>hierarchical</u> specification of scheduling in system-level simulations

A copy of the first page of the patent application showing the title of the application is enclosed.

Please forward the amended Official Filing Receipt to:

John W. Carpenter CROSBY, HEAFEY, ROACH & MAY P.O. Box 7936 San Francisco, CA 94120-7936

In the event it is determined that a fee pursuant to 37 C.F.R. § 1.19(h) is required in connection with this request, the Commissioner is hereby authorized to charge any additional fees, including any fees necessary for extensions of time, or credit overpayment to Deposit Account No. 03-3821, referencing Attorney Docket No. 21891.02500. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

Crosby, Heafey, Roach & May Professional Corporation

Dated: December 19, 2000

Two Embarcadero Center, Ste. 2000 P.O. Box 7936 San Francisco, CA 94120-7936 Direct Dial (415) 659-5927 (415) 543-8700 Telephone (415) 391-8269 Facsimile jcarpenter@chrm.com

Name: John W/Carpenter Registration No. 39,129 Attorneys for Applicants



#### United States Patent and Trademark Office

COMMISSIONER FOR PATENTS UNITED STATES PATENT AND TRADEMARK OFFICE WASHINGTON, D.C. 20231

ICATION NUMBER

FILING DATE

GRP ART UNIT

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TOT CLAIMS IND CLAIMS

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osby, Heafey, Roach & May P.O. Box 7936 San Francisco, CA 94120-7936

UEC 1 9 2000

**FILING RECEIPT** 



Date Mailed: 12/07/2000

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

Applicant(s)

Christopher Hoover, Los Gatos, CA;

Continuing Data as Claimed by Applicant

Foreign Applications

If Required, Foreign Filing License Granted 11/30/2000

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Title

hierarchical

Method for hierarchial specification of scheduling in system-level simulations

**Preliminary Class** 

703

Data entry by : GURMU, MULUEMEBET

Team: OIPE

Date: 12/07/2000



### A METHOD FOR HIERARCHICAL SPECIFICATION OF SCHEDULING IN SYSTEM-LEVEL SIMULATIONS

Inventor: Christopher Hoover



#### ABSTRACT OF THE DISCLOSURE

PECHNOON COME STON A method for hierarchical specification and modeling of scheduling in system-level simulations. The invention addresses the specification aspect by introducing an explicit notion of a scheduler that must be designed as part of the system. A scheduler effectively represents a scheduling policy for an architectural resource. A scheduling policy governs how behaviors assigned to a resource, gain access and share the resource. The invention includes a general framework for modeling a scheduling policy, which includes a simple mechanism that covers many common cases. This framework is part of a Virtual Component Codesign (VCC) process, which is targeted at consumer embedded system design. Two orthogonal models, one of a scheduler and one of a schedulable, comprise the overall modeling of scheduling in the invention. The two models interact by sending messages to each other via a simple protocol. The protocol itself is implemented by a pair of abstract interfaces, which in turn are implemented in concrete schedulable and scheduler objects in the simulator.





COMMISSIONER FOR PATENTS
UNITED STATES PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 2023

www.uspto.gov/

**CONFIRMATION NO. 3943** 

Bib Data Sheet										
<b>SERIAL NUMBER</b> 09/691,406		FILING DATE 10/17/2000 RULE	(	CLASS GROUP ART 703 2123		DO DO		ATTORNEY OCKET NO. 1891.02500		
APPLICANTS Christopher	r Hoo	ver, Los Gatos, CA;	A 5							
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IF REQUIRED, FO ** 11/30/2000	OREI	GN FILING LICENSE	GRANT	ED						
Foreign Priority claimed  35 USC 119 (a-d) conditions met  Verified and Acknowledged  Exar		yes no Met after Allowance Initials		STATE OR COUNTRY CA	SHEETS DRAWING 6		TOTAL CLAIMS 28		INDEPENDENT CLAIMS 2	
ADDRESS John W. Carpente CROSBY, HEAFE P.O. Box 7936 San Francisco ,C.	EY, R									
TITLE										
Method for hierard	chical	specification of sched	uling in s	system-level si	mulatio	ons				
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					☐ 1.16 Fees ( Filing )					
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Attorney's Docket No. 21891.02500

#### N THE UNITED STATES PATENT AND TRADEMARK OFFICE

application of:
Christopher Hoover

For: METHOD FOR HIERARCHICAL SPECIFICATION OF SCHEDULING IN SYSTEM-LEVEL SIMULATIONS

Serial No.: 09/691,406

Filed: October 17, 2000

Examiner:

Group Art Unit: 2123

AUG 0 7 2001
Technology Center 2100

#### SECOND REQUEST FOR CORRECTION OF THE OFFICIAL FILING RECEIPT

Assistant Commissioner for Patents Office of Initial Patent Examination Customer Service Center Washington, D.C. 20231

Sir:

On December 19, 2000, Applicant filed a Request for Correction of the Official Filing Receipt (copy enclosed) in the above-referenced application. Applicant received a second Filing Receipt dated April 20, 2001, however, the requested correction had not yet been made.

The Filing Receipt is still in error. Please amend the receipt as shown in red ink on the attached copy as follows:

The Title should read:

Method for <u>hierarchical</u> specification of scheduling in system-level simulations

Please forward the amended Official Filing Receipt to:



John W. Carpenter CROSBY, HEAFEY, ROACH & MAY P.O. Box 7936 San Francisco, CA 94120-7936



No fee is believed to be required, however if it is determined that a fee pursuant to 37 C.F.R. § 1.19(h) is required in connection with this request, the Commissioner is hereby authorized to charge any additional fees, including any fees necessary for extensions of time, or credit overpayment to Deposit Account No. 03-3821, referencing Attorney Docket No. 21891.02500. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

Crosby, Heafey, Roach & May Professional Corporation

Dated: May 14, 2001

Two Embarcadero Center, Ste. 2000 P.O. Box 7936 San Francisco, CA 94120-7936 Direct Dial (415) 659-5927 (415) 543-8700 Telephone (415) 391-8269 Facsimile icarpenter@chrm.com

Name: John W. Carpenter Registration No. 39,129 Attorneys for Applicants

**CERTIFICATE OF MAILING - 37 C.F.R. § 1.08** 

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Assistant Commissioner for Patents, Office of Initial Patent Examination, Customer Service Center, Washington, D.C. 20231 on May 14, 2001.

May 14, 2001

Sandy Ellsworth

IND CLAIMS

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#### United States Patent and Trademark Office

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APPLICATION NUMBER FILING DATE GRP ART UNIT FIL FEE REC'D ATTY.DOCKET.NO **DRAWINGS** TOT CLAIMS 09/691,406 10/17/2000 2123 984 21891.02500

**CONFIRMATION NO. 3943** 

**FILING RECEIPT** 

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Technology Center 2100

n W. Carpenter CROSBY, HEAFEY, ROACH & MAY P.O. Box 7936 San Francisco, CA 94120-7936

Date Mailed: 04/20/2001

Receipt is acknowledged of this nonprovisional Patent Application. It will be considered in its order and you will be notified as to the results of the examination. Be sure to provide the U.S. APPLICATION NUMBER, FILING DATE, NAME OF APPLICANT, and TITLE OF INVENTION when inquiring about this application. Fees transmitted by check or draft are subject to collection. Please verify the accuracy of the data presented on this receipt. If an error is noted on this Filing Receipt, please write to the Office of Initial Patent Examination's Customer Service Center. Please provide a copy of this Filing Receipt with the changes noted thereon. If you received a "Notice to File Missing Parts" for this application, please submit any corrections to this Filing Receipt with your reply to the Notice. When the PTO processes the reply to the Notice, the PTO will generate another Filing Receipt incorporating the requested corrections (if appropriate).

- 4 2001

Applicant(s)

Christopher Hoover, Los Gatos, CA;

Domestic Priority data as claimed by applicant

Foreign Applications

If Required, Foreign Filing License Granted 11/30/2000

Projected Publication Date: N/A

Non-Publication Request: No

Early Publication Request: No

Title

hierarchical

Method for-hierarchial specification of scheduling in system-level simulations

**Preliminary Class** 

703

Data entry by : WOLDEYES, TEGUEST

Team : OIPE

Date: 04/20/2001



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#### PLEASE NOTE the following information about the Filing Receipt:

- The articles such as "a," "an" and "the" are not included as the first words in the title of an application. They are considered to be unnecessary to the understanding of the title.
- The words "new," "improved," "improvements in" or "relating to" are not included as first words in the title of an application because a patent application, by nature, is a new idea or improvement.
- The title may be truncated if it consists of more than 600 characters (letters and spaces combined).
- The docket number allows a maximum of 25 characters.
- If your application was submitted under 37 CFR 1.10, your filing date should be the "date in" found on the Express Mail label. If there is a discrepancy, you should submit a request for a corrected Filing Receipt along with a copy of the Express Mail label showing the "date in."
- The title is recorded in sentence case.

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